



Figure 2

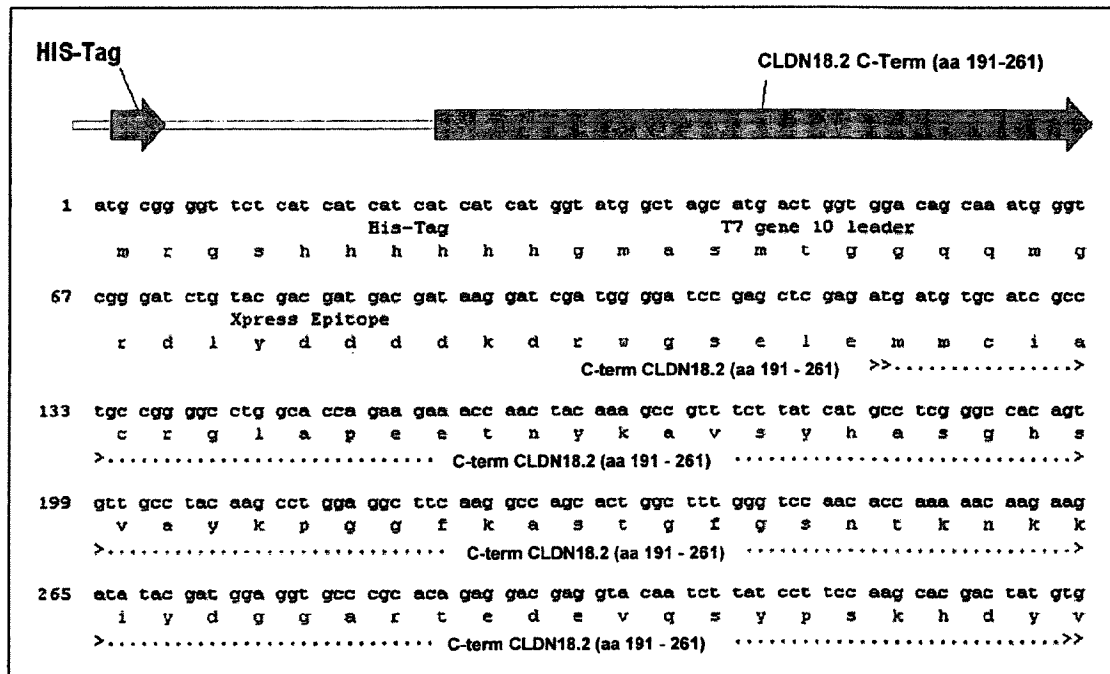


**Figure 3****Heavy chain**

|            |             |            |               |                            |
|------------|-------------|------------|---------------|----------------------------|
|            | 1           | Leader     |               | 50                         |
| H-43-14A_2 | MAWVWTLFL   | MAAAQSIQAQ | IQLVQSGPEL    | KKFGETVKIS CKASGYTFTD CDR1 |
| H-35-22A_1 | MNFGLSLIFL  | VLVLKGVQCE | VHLVESGGGL    | VKPGGSLKLS CAASGTFSS       |
|            | 51          |            | CDR2          | 100                        |
| H-43-14A_2 | YSIHWVKQAP  | GKGLKWMGWI | NTETGVPTYA    | DDFKGRFAFS LETSASTAYL      |
| H-35-22A_1 | YAMSWVRQTP  | EKRLEWVATI | SDGGSYSYYP    | DNVKGRTTIS RDNAKNNLYL      |
|            | 101         |            | CDR3          | 140                        |
| H-43-14A_2 | QINNLIKNETD | ATYFCARRTG | FD-----YW     | GQGTTLTVSS                 |
| H-35-22A_1 | QMSHLKSED   | AIYYCARD   | SY YDNSYVRDYW | GQGTTLTVSS                 |

**Light chain**

|            |            |             |            |                            |
|------------|------------|-------------|------------|----------------------------|
|            | 1          | Leader      |            | 50                         |
| LN-43-14A_ | MRFSAQLLGL | LVLWIPGSTA  | DIVMTQAAFS | IPVTLGTSAS ISCRSSKNLL CDR1 |
| LN-35-22A_ | MRTPAQFLGI | LLWFPGIKC   | DIKMTQSPSS | MYASLGERVS ITCKASQDIN      |
|            | 51         |             | CDR2       | 100                        |
| LN-43-14A_ | HSDGITYLYW | YLQRPQSPQ   | LLIYRVSNLA | SGVPNRFSGS ESGTDFTLRI      |
| LN-35-22A_ | -----TFLSW | FQOKPGKSPK  | TLIYRTNRLI | DGVPSRFSGS GSGQDYSLTI      |
|            | 101        |             | CDR3       | 132                        |
| LN-43-14A_ | SRVEAEDVG  | VYYCVQVLELP | FTFGGGTKLE | IK                         |
| LN-35-22A_ | SSLDYEDMG  | IYYCLQYDEFP | LTFGAGTKLE | LK                         |

# SEQUENCE LISTING

<110> Ganymed Pharmaceuticals AG  
 <120> ANTIBODIES AGAINST CLAUDIN 18.2 USEFUL IN CANCER DIAGNOSIS  
 <130> SG5026A  
 <150> PCT/EP2012/001991  
 <151> 2012-05-09  
 <160> 25  
 <170> PatentIn version 3.5  
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 <212> PRT  
 <213> Homo sapiens  
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Met Ser Thr Thr Thr Cys Gln Val Val Ala Phe Leu Leu Ser Ile Leu  
 1 5 10 15

Gly Leu Ala Gly Cys Ile Ala Ala Thr Gly Met Asp Met Trp Ser Thr  
 20 25 30

Gln Asp Leu Tyr Asp Asn Pro Val Thr Ser Val Phe Gln Tyr Glu Gly  
 35 40 45

Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe Thr Glu Cys Arg  
 50 55 60

Pro Tyr Phe Thr Ile Leu Gly Leu Pro Ala Met Leu Gln Ala Val Arg  
 65 70 75 80

Ala Leu Met Ile Val Gly Ile Val Leu Gly Ala Ile Gly Leu Leu Val  
 85 90 95

Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Glu Asp Ser  
 100 105 110

Ala Lys Ala Asn Met Thr Leu Thr Ser Gly Ile Met Phe Ile Val Ser  
 115 120 125

Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val  
 130 135 140

Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Thr Gly Met Gly Gly  
 145 150 155 160

Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe  
 165 170 175

Val Gly Trp Val Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met  
 180 185 190

Cys Ile Ala Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala  
195 200 205

Val Ser Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly  
210 215 220

Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile  
225 230 235 240

Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro Ser  
245 250 255

Lys His Asp Tyr Val  
260

<210> 2  
<211> 261  
<212> PRT  
<213> Homo sapiens

<400> 2

Met Ala Val Thr Ala Cys Gln Gly Leu Gly Phe Val Val Ser Leu Ile  
1 5 10 15

Gly Ile Ala Gly Ile Ile Ala Ala Thr Cys Met Asp Gln Trp Ser Thr  
20 25 30

Gln Asp Leu Tyr Asn Asn Pro Val Thr Ala Val Phe Asn Tyr Gln Gly  
35 40 45

Leu Trp Arg Ser Cys Val Arg Glu Ser Ser Gly Phe Thr Glu Cys Arg  
50 55 60

Gly Tyr Phe Thr Leu Leu Gly Leu Pro Ala Met Leu Gln Ala Val Arg  
65 70 75 80

Ala Leu Met Ile Val Gly Ile Val Leu Gly Ala Ile Gly Leu Leu Val  
85 90 95

Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Glu Asp Ser  
100 105 110

Ala Lys Ala Asn Met Thr Leu Thr Ser Gly Ile Met Phe Ile Val Ser  
115 120 125

Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val  
130 135 140

Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Thr Gly Met Gly Gly  
145 150 155 160

Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe  
 165 170 175  
 Val Gly Trp Val Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met  
 180 185 190  
 Cys Ile Ala Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala  
 195 200 205  
 Val Ser Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly  
 210 215 220  
 Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile  
 225 230 235 240  
 Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro Ser  
 245 250 255  
 Lys His Asp Tyr Val  
 260

<210> 3  
 <211> 264  
 <212> PRT  
 <213> Mus musculus

<400> 3

Met Ser Val Thr Ala Cys Gln Gly Leu Gly Phe Val Val Ser Leu Ile  
 1 5 10 15  
 Gly Phe Ala Gly Ile Ile Ala Ala Thr Cys Met Asp Gln Trp Ser Thr  
 20 25 30  
 Gln Asp Leu Tyr Asn Asn Pro Val Thr Ala Val Phe Asn Tyr Gln Gly  
 35 40 45  
 Leu Trp Arg Ser Cys Val Arg Glu Ser Ser Gly Phe Thr Glu Cys Arg  
 50 55 60  
 Gly Tyr Phe Thr Leu Leu Gly Leu Pro Ala Met Leu Gln Ala Val Arg  
 65 70 75 80  
 Ala Leu Met Ile Val Gly Ile Val Leu Gly Val Ile Gly Ile Leu Val  
 85 90 95  
 Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Asp Asp Ser  
 100 105 110  
 Ala Lys Ala Lys Met Thr Leu Thr Ser Gly Ile Leu Phe Ile Ile Ser  
 115 120 125

Gly Ile Cys Ala Ile Ile Gly Val Ser Val Phe Ala Asn Met Leu Val  
130 135 140

Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Ser Gly Met Gly Gly  
145 150 155 160

Met Gly Gly Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala  
165 170 175

Ala Leu Phe Val Gly Trp Val Ala Gly Gly Leu Thr Leu Ile Gly Gly  
180 185 190

Val Met Met Cys Ile Ala Cys Arg Gly Leu Thr Pro Asp Asp Ser Asn  
195 200 205

Phe Lys Ala Val Ser Tyr His Ala Ser Gly Gln Asn Val Ala Tyr Arg  
210 215 220

Pro Gly Gly Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Arg Asn  
225 230 235 240

Lys Lys Ile Tyr Asp Gly Gly Ala Arg Thr Glu Asp Asp Glu Gln Ser  
245 250 255

His Pro Thr Lys Tyr Asp Tyr Val  
260

<210> 4  
<211> 261  
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<222> (18)..(18)  
<223> Variable Amino Acid

<400> 4

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Gly Xaa Ala Gly Ile Ile Ala Ala Thr Cys Met Asp Gln Trp Ser Thr  
20 25 30

Gln Asp Leu Tyr Asn Asn Pro Val Thr Ala Val Phe Asn Tyr Gln Gly  
35 40 45

Leu Trp Arg Ser Cys Val Arg Glu Ser Ser Gly Phe Thr Glu Cys Arg  
50 55 60

Gly Tyr Phe Thr Leu Leu Gly Leu Pro Ala Met Leu Gln Ala Val Arg  
65 70 75 80

Ala Leu Met Ile Val Gly Ile Val Leu Gly Ala Ile Gly Leu Leu Val  
85 90 95

Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Glu Asp Ser  
100 105 110

Ala Lys Ala Asn Met Thr Leu Thr Ser Gly Ile Met Phe Ile Val Ser  
115 120 125

Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val  
130 135 140

Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Thr Gly Met Gly Gly  
145 150 155 160

Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe  
165 170 175

Val Gly Trp Val Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met  
180 185 190

Cys Ile Ala Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala  
195 200 205

Val Ser Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly  
210 215 220

Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile  
225 230 235 240

Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro Ser  
245 250 255

Lys His Asp Tyr Val  
260

<210> 5  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Peptide For Immunization

<400> 5

Thr Glu Asp Glu Val Gln Ser Tyr Pro Ser Lys His Asp Tyr Val  
1 5 10 15

<210> 6  
<211> 12

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Peptide For Immunization

<400> 6

Glu Val Gln Ser Tyr Pro Ser Lys His Asp Tyr Val  
1 5 10

<210> 7  
<211> 134  
<212> PRT  
<213> Mus musculus

<400> 7

Met Ala Trp Val Trp Thr Leu Leu Phe Leu Met Ala Ala Ala Gln Ser  
1 5 10 15

Ile Gln Ala Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys  
20 25 30

Phe Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
35 40 45

Thr Asp Tyr Ser Ile His Trp Val Lys Gln Ala Pro Gly Lys Gly Leu  
50 55 60

Lys Trp Met Gly Trp Ile Asn Thr Glu Thr Gly Val Pro Thr Tyr Ala  
65 70 75 80

Asp Asp Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser  
85 90 95

Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr  
100 105 110

Tyr Phe Cys Ala Arg Arg Thr Gly Phe Asp Tyr Trp Gly Gln Gly Thr  
115 120 125

Thr Leu Thr Val Ser Ser  
130

<210> 8  
<211> 8  
<212> PRT  
<213> Mus musculus

<400> 8

Gly Tyr Thr Phe Thr Asp Tyr Ser  
1 5

<210> 9  
<211> 8

<212> PRT  
<213> Mus musculus

<400> 9

Ile Asn Thr Glu Thr Gly Val Pro  
1 5

<210> 10  
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<400> 10

Ala Arg Arg Thr Gly Phe Asp Tyr  
1 5

<210> 11  
<211> 132  
<212> PRT  
<213> Mus musculus

<400> 11

Met Arg Phe Ser Ala Gln Leu Leu Gly Leu Leu Val Leu Trp Ile Pro  
1 5 10 15

Gly Ser Thr Ala Asp Ile Val Met Thr Gln Ala Ala Phe Ser Ile Pro  
20 25 30

Val Thr Leu Gly Thr Ser Ala Ser Ile Ser Cys Arg Ser Ser Lys Asn  
35 40 45

Leu Leu His Ser Asp Gly Ile Thr Tyr Leu Tyr Trp Tyr Leu Gln Arg  
50 55 60

Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Val Ser Asn Leu Ala  
65 70 75 80

Ser Gly Val Pro Asn Arg Phe Ser Gly Ser Glu Ser Gly Thr Asp Phe  
85 90 95

Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr  
100 105 110

Cys Val Gln Val Leu Glu Leu Pro Phe Thr Phe Gly Gly Gly Thr Lys  
115 120 125

Leu Glu Ile Lys  
130

<210> 12  
<211> 11  
<212> PRT  
<213> Mus musculus

<400> 12

Lys Asn Leu Leu His Ser Asp Gly Ile Thr Tyr  
1 5 10

<210> 13

<211> 3

<212> PRT

<213> Mus musculus

<400> 13

Arg Val Ser  
1

<210> 14

<211> 9

<212> PRT

<213> Mus musculus

<400> 14

Val Gln Val Leu Glu Leu Pro Phe Thr  
1 5

<210> 15

<211> 140

<212> PRT

<213> Mus musculus

<400> 15

Met Asn Phe Gly Leu Ser Leu Ile Phe Leu Val Leu Val Leu Lys Gly  
1 5 10 15

Val Gln Cys Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys  
20 25 30

Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe  
35 40 45

Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu  
50 55 60

Glu Trp Val Ala Thr Ile Ser Asp Gly Gly Ser Tyr Ser Tyr Tyr Pro  
65 70 75 80

Asp Asn Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn  
85 90 95

Asn Leu Tyr Leu Gln Met Ser His Leu Lys Ser Glu Asp Thr Ala Ile  
100 105 110

Tyr Tyr Cys Ala Arg Asp Ser Tyr Tyr Asp Asn Ser Tyr Val Arg Asp  
115 120 125

Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser

| 130                                                             | 135 | 140 |
|-----------------------------------------------------------------|-----|-----|
| <210> 16                                                        |     |     |
| <211> 8                                                         |     |     |
| <212> PRT                                                       |     |     |
| <213> Mus musculus                                              |     |     |
| <400> 16                                                        |     |     |
| Gly Phe Thr Phe Ser Ser Tyr Ala                                 |     |     |
| 1 5                                                             |     |     |
| <210> 17                                                        |     |     |
| <211> 8                                                         |     |     |
| <212> PRT                                                       |     |     |
| <213> Mus musculus                                              |     |     |
| <400> 17                                                        |     |     |
| Ile Ser Asp Gly Gly Ser Tyr Ser                                 |     |     |
| 1 5                                                             |     |     |
| <210> 18                                                        |     |     |
| <211> 14                                                        |     |     |
| <212> PRT                                                       |     |     |
| <213> Mus musculus                                              |     |     |
| <400> 18                                                        |     |     |
| Ala Arg Asp Ser Tyr Tyr Asp Asn Ser Tyr Val Arg Asp Tyr         |     |     |
| 1 5 10                                                          |     |     |
| <210> 19                                                        |     |     |
| <211> 127                                                       |     |     |
| <212> PRT                                                       |     |     |
| <213> Mus musculus                                              |     |     |
| <400> 19                                                        |     |     |
| Met Arg Thr Pro Ala Gln Phe Leu Gly Ile Leu Leu Leu Trp Phe Pro |     |     |
| 1 5 10 15                                                       |     |     |
| Gly Ile Lys Cys Asp Ile Lys Met Thr Gln Ser Pro Ser Ser Met Tyr |     |     |
| 20 25 30                                                        |     |     |
| Ala Ser Leu Gly Glu Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp |     |     |
| 35 40 45                                                        |     |     |
| Ile Asn Thr Phe Leu Ser Trp Phe Gln Gln Lys Pro Gly Lys Ser Pro |     |     |
| 50 55 60                                                        |     |     |
| Lys Thr Leu Ile Tyr Arg Thr Asn Arg Leu Ile Asp Gly Val Pro Ser |     |     |
| 65 70 75 80                                                     |     |     |
| Arg Phe Ser Gly Ser Gly Ser Gly Gln Asp Tyr Ser Leu Thr Ile Ser |     |     |
| 85 90 95                                                        |     |     |
| Ser Leu Asp Tyr Glu Asp Met Gly Ile Tyr Tyr Cys Leu Gln Tyr Asp |     |     |

100 105 110

Glu Phe Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys  
115 120 125

<210> 20  
<211> 6  
<212> PRT  
<213> Mus musculus

<400> 20

Gln Asp Ile Asn Thr Phe  
1 5

<210> 21  
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<400> 21

Arg Thr Asn  
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<210> 22  
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<400> 22

Leu Gln Tyr Asp Glu Phe Pro Leu Thr  
1 5

<210> 23  
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<213> Artificial Sequence

<220>  
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atgggtcggg atctgtacga cgatgacgat aaggatcgat ggggatccga gctcgagatg 120  
atgtgcatcg cctgccgggg cctggcacca gaagaaacca actacaaagc cgtttcttat 180  
catgcctcgg gccacagtgt tgcctacaag cctggaggct tcaaggccag cactggcttt 240  
gggtccaaca ccaaaaacaa gaagatatac gatggagggtg cccgcacaga ggacgaggta 300  
caatcttatc cttccaagca cgactatgtg 330

<210> 24  
<211> 110  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Peptide For Immunization

<400> 24

Met Arg Gly Ser His His His His His His Gly Met Ala Ser Met Thr  
1 5 10 15  
Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys Asp  
20 25 30  
Arg Trp Gly Ser Glu Leu Glu Met Met Cys Ile Ala Cys Arg Gly Leu  
35 40 45  
Ala Pro Glu Glu Thr Asn Tyr Lys Ala Val Ser Tyr His Ala Ser Gly  
50 55 60  
His Ser Val Ala Tyr Lys Pro Gly Gly Phe Lys Ala Ser Thr Gly Phe  
65 70 75 80  
Gly Ser Asn Thr Lys Asn Lys Lys Ile Tyr Asp Gly Gly Ala Arg Thr  
85 90 95  
Glu Asp Glu Val Gln Ser Tyr Pro Ser Lys His Asp Tyr Val  
100 105 110

<210> 25

<211> 71

<212> PRT

<213> Artificial Sequence

<220>

<223> Peptide For Immunization

<400> 25

Met Met Cys Ile Ala Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr  
1 5 10 15  
Lys Ala Val Ser Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro  
20 25 30  
Gly Gly Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys  
35 40 45  
Lys Ile Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr  
50 55 60  
Pro Ser Lys His Asp Tyr Val  
65 70